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P.B. Arsenal

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October 10, 1967

Mr. Walter R. Hager
Department of the Interior
Federal Water Pollution Control Administration
South Central Region
1407 Main Street
Dallas, Texas 75202

Dear Mr. Hager:

Following are results of phosphate analysis of Arkansas River samples at Lock & Dam #5 above the Pine Bluff Arsenal and at Highway 79 below the Arsenal:

<u>Date</u>	<u>Phosphates, mg/l</u>	
	<u>Lock & Dam #5</u>	<u>Highway 79</u>
9-12-67	3.6	3.0
9-19-67	2.0	1.5
9-26-67	3.0	1.9

Enclosed also are results of a complete analysis of the Arkansas River above the Arsenal from a 1960 APCC survey which shows average phosphates of 1.9 ppm as well as averages of other parameters.

These background counts are much greater than concentrations known to cause undesirable aquatic growths, around 0.01 mg/l. They are also much greater than concentrations known to cause difficulties with coagulation in water treatment, around 0.1 mg/l. The indication therefore, is that the phosphate concentration in the Arkansas River near the Arsenal should not be significantly increased due to discharges thereto.

The Arkansas Pollution Control Commission, just as the National Technical Advisory Committee on Water Quality Criteria to the Secretary of the Interior, would like to establish exact criteria on phosphorous concentrations but has not been able to establish any because of the complexity of the problem. We do know from limited sampling that the present phosphate concentration in the river varies usually from around 0.3 to 4.0 mg/l and should not be increased. We have already given you a figure of 0.00 mg/l limit on elemental phosphorous.

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Mr. Hager

-2-

October 10, 1967

As sampling and flow results on the Arsenal wastes are obtained, we will be glad to discuss the matter further when we can take an overall look at the relationship between phosphate concentrations, waste flows, river flows, and treatment technology available.

Very truly yours,

Louie C. Cockmon, Jr.
Assistant Director

LCC:jn
Enclosure